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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Sebastien Perrier** Docket: **102889-202**  
Serial No.: **10/583,809** Art Unit: **1751**  
Filed: **June 7, 2007** Examiner:  
Conf. No. **4913**  
Title: **POLYMERISATION USING CHAIN TRANSFER AGENTS**

**FAX TRANSMITTAL LETTER**

Mail Stop PGPUB  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

In connection with the above-mentioned patent application, please verify by return facsimile the receipt of the following documents transmitted herewith:

- Request for Corrected Publication Under 37 CFR 1.221(b) (5 pages).

**CERTIFICATE OF MAILING OR TRANSMISSION (37 CFR 1.8(a))**

I hereby certify that this correspondence (along with any paper referred to as being attached or enclosed) is being:

deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to Mail Stop PGPUB, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

transmitted by facsimile on the date shown below to the United States Patent and Trademark Office via facsimile at (571) 273-8300.

Date: February 27, 2008

Signed:   
Sherri T. Dente

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FEB 27 2008

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Sebastien Perrier Docket: 102889-202  
Serial No.: 10/583,809 Art Unit: 1751  
Filed: June 7, 2007 Conf. No.: 4913  
Assignee: The University of Leeds  
Title: POLYMERISATION USING CHAIN TRANSFER AGENTS

## Certificate of Facsimile Transmission

Date of Transmission: February 27, 2008  
I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being filed with the United States Patent and Trademark Office via facsimile transmission on the date shown above to 1-571-275-8300.

Signed: Sherri Dente

Name: Sherri T. Dente

REQUEST FOR CORRECTED PUBLICATION UNDER 37 CFR 1.221(b)

Mail Stop PGPUB  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

A request for a corrected publication under 37 CFR 1.221(b) is hereby made for US Publication No. US 2007/0299221, published on December 27, 2007. This request is being submitted within the two month time limit. The material errors made in the above-referenced publication are the result of USPTO errors and were not in the application as filed.

The following material errors are noted on the above-mentioned patent application publication. A copy of the relevant pages of the patent application publication with the errors marked thereon is enclosed herewith.

Accordingly, it is hereby requested that a Corrected Publication be issued with the following corrections:

Attorney Docket No. 102889-202  
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1. On page 5 paragraph [0057] of the publication, the USPTO has omitted an "n" in the 4<sup>th</sup> and 5<sup>th</sup> line of the formulas. Please see attached sheet with corrections highlighted.

2. In Claim 4, the 5<sup>th</sup> line of text should read "N=N bond" as opposed to "N'N bond".

Thus, Claim 4 should read as follows:

4. A method as claimed in claim 1 wherein the second source of radicals is a compound capable of forming a carbon or oxygen centered radical of Formula (8)

R2-W-R3

Wherein R2 and R3 are independently selected from the group R'; and W is a N=N bond, an O-O bond or a group that decomposes thermally or photolytically to form two residues containing a carbon or oxygen centered radical and at least one of R2 or R3 reacts with the polymer of Formula (6) or Formula (7) to leave the moiety R1 comprising the functional group.

Applicant respectfully submits that the above-mentioned errors are material in that they affect the public's ability to determine the scope of the patent application.

Applicant respectfully requests that the Patent Office make the above corrections and publish an updated patent application. This request is being submitted within the two month time limit.

Attorney Docket No. 102889-202  
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If the Examiner requires any additional information, the Examiner is invited to contact  
Applicant's representative at the telephone number below.

Respectfully submitted,

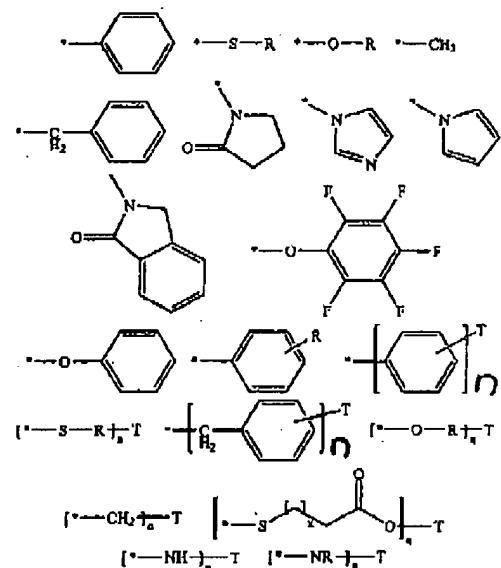
Sebastien Perrier

Date: February 27, 2008

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[0057] Preferred groups Z include



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optionally substituted heterocyclyl, substituted or non-substituted C<sub>1</sub> to C<sub>20</sub> (especially C<sub>1</sub> to C<sub>4</sub>) alkoxy, optionally substituted alkyl thio, thioalkoxyl (optionally substituted with a polymer); substituted or non-substituted benzyl (optionally substituted with a solid support), optionally substituted aryl oxy carbonyl (—COOR"), carboxy (—COOH), optionally substituted ocyloxy (—O<sub>2</sub>CR"), optionally substituted acyloxy (—CO<sub>2</sub>CR"), optionally substituted carbonyl (—CONR"<sub>2</sub>), cyano (—CN), dialkyl- or diaryl phosphonato (—P(=O)R"Z), dialkyl- or diaryl-phosphonato [—P(=O)R"Z] or SCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>T (where T is a solid support or a polymer); the linker may optionally comprise a straight or branched chain, substituted or non substituted C<sub>1</sub> to C<sub>20</sub> alkyl (especially a C<sub>1</sub> to C<sub>4</sub> alkyl such as methyl or ethyl); phenyl, substituted phenyl; phenyl covalently bonded to a polymer; substituted or non-substituted C<sub>1</sub> to C<sub>20</sub> (especially C<sub>1</sub> to C<sub>4</sub>) alkoxy, thioalkoxyl (optionally substituted with a polymer); substituted or non-substituted benzyl;

most preferably Z is a solid support or a linker attached to a solid support;

R" is selected from the group consisting of optionally substituted C<sub>1</sub>-C<sub>18</sub> alkyl, C<sub>2</sub>-C<sub>18</sub> alkenyl, aryl, heterocyclyl, aralkyl, alkaryl wherein the substituents are independently selected from the group that consists of epoxy, hydroxyl, alkoxy, acyl, acyloxy, carboxy (and salts), sulfonic acid (and salts), alkoxy- or acyloxy carbonyl, isocyanato, cyano, silyl halo, and dialkylamino;

Q is at least one olefinically unsaturated monomer, optionally two or more different olefinically unsaturated monomers;

q—an integer of at least 2;

p—an integer of at least 1;

m—an integer of at least 1.

2. A method of making a functionalised polymer according to claim 1, wherein the olefinically unsaturated monomer comprises vinyl monomers of Formula (5):



(5)

wherein X is selected from the group consisting of hydrogen, halogen and substituted or unsubstituted C<sub>1</sub>-C<sub>4</sub> alkyl, said alkyl substituents being independently selected for the group consisting of hydroxyl, alkoxy, OR", CO<sub>2</sub>H, CO<sub>2</sub>R", O<sub>2</sub>CR" and combinations thereof; and

wherein Y is selected from the group consisting of hydrogen, R", CO<sub>2</sub>H, CO<sub>2</sub>R", COR", CN, CONH<sub>2</sub>, CONHR", CONR"<sub>2</sub>, O<sub>2</sub>CR", OR" and halogen.

3. A method as claimed in claim 1 wherein the compound of Formula (3) or (4) is recovered at the end of the process.

4. A method as claimed in claim 1 wherein the second source of radicals is a compound capable of forming a carbon or oxygen centred radical of Formula (8)

R2-W-R3

Wherein R2 and R3 are independently selected from the group R'; and W is a NN bond, an O—O bond or a group that decomposes thermally or photolytically to form two residues containing a carbon or oxygen centred radical and at least one of R2 or R3 reacts with the polymer of Formula (6) or Formula (7) to leave the moiety R1 comprising the functional group.

5. A method according to claim 4, wherein R1, R2 and/or R3 may be the same or different and are selected from a group consisting of alkyl, substituted alkyl, alkoxy, substituted alkoxy, an aromatic saturated or unsaturated carbocyclic or heterocyclic ring, optionally substituted with one or more substituents, amino alkyl, cyanoalkyl, hydroxylalkyl, saturated and unsaturated amido; an organometallic species, a polymer chain and any of the foregoing substituted with one or more CN or OH groups.

6. A method as claimed in claim 1 wherein the group Z is selected from the group consisting of: methyl, ethyl, other C<sub>1</sub>-C<sub>4</sub> alkyl, methylene covalently bonded to a polymer, methylene covalently bonded to a solid support T, phenyl, substituted phenyl, phenyl covalently bonded to a polymer, phenyl covalently bonded to solid support T, alkoxy, substituted alkoxy, thioalkoxy, substituted with a solid support T, benzyl, substituted benzyl, benzyl substituted with a polymer, benzyl substituted with a solid support T, SCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>T wherein T is a polymer or solid support and preferably SCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>T wherein T is a solid support or polymer.

7. A method as claimed in claim 6 wherein the group Z is selected from the group consisting of:

